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(54) Title: GENE FUNCTION INFERRING USING GENE EXPRESSION DATA

(57) Abstract: Potential functions of one or more genes are inferred from gene expression measurements. A method involves assembling a distribution of expression level measurements for one or more genes. The method also involves calculating a significance value for each of the expression level measurements. The significance values determine which gene expression samples are classified as relevant and which are classified as irrelevant. The two sample classes are compared to each other to determine the non-overlapping parameters from the gene expression data between them. The non-overlapping parameters are used to indicate gene function of an unknown gene.

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# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/04324

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G01N 33/48  
US CL : 702/19

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 702/19, 20

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Please See Continuation Sheet

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,317,700 B1 (BAGNE) 13 November 2001 (13.11.2001), see Brief Summary of the Invention.	1-30
Y	US 6,263,287 B1 (ZHENG et al.) 17 July 2001 (17.07.2001), see Detailed Description of the Preferred Embodiments.	1-30
Y	US 6,245,517 B1 (CHEN et al.) 12 June 2001 (12.06.2001), see Detailed Description.	1-30
Y,P	US 6,351,712 B1 (STOUGHTON et al.) 26 February 2002 (26.02.2002), see Detailed Description of the Invention.	1-30
Y,P	US 6,502,039 B1 (THEILHABER et al.) 31 December 2002 (31.12.2002), see Summary of the Invention.	1-30
Y,E	US 6,567,750 B1 (NADON et al.) 20 May 2003 (20.05.2003), see Description of the Preferred Embodiment.	1-30

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

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"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

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"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

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INTERNATIONAL SEARCH REPORT

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**Continuation of B. FIELDS SEARCHED Item 3:**

WEST, PUBMED, EMBASE, BIOSIS, MEDLINE, SCISEARCH searching terms: method, infer, function, gene, gene expression, score, parameter, selected, non-selected, database, measurements, z-score, ecotype, tissue, RNA, harvest conditions, genotype, growth conditions, treatments, computer readable medium, system, computer system, processor, memory, display, program, module